- (i) The probability of a loss greater than that estimated shall not exceed one percent;
- (ii) The scenarios reflect changes in foreign exchange, equity, or commodity market prices that have been observed over 120-business day periods of market stress, as determined using historical data that is from an appropriate period; and
- (iii) The total number of, and specific historical observations identified by the Bank as, stress scenarios shall be:
- (A) Satisfactory to the Finance Board:
- (B) Representative of the periods of greatest potential stress given the Bank's portfolio; and
- (C) Comprehensive given the modeling capabilities available to the Bank; and
- (iv) The measure of the market value of the Bank's portfolio at risk may incorporate empirical correlations within or among foreign exchange rates, equity prices, or commodity prices.
- (c) Independent validation of Bank internal market risk model or internal cash flow model. (1) Each Bank shall conduct an independent validation of its internal market risk model or internal cash flow model within the Bank that is carried out by personnel not reporting to the business line responsible for conducting business transactions for the Bank. Alternatively, the Bank may obtain independent validation by an outside party qualified to make such determinations. Validations shall be done on an annual basis, or more frequently as required by the Finance Board.
- (2) The results of such independent validations shall be reviewed by the Bank's board of directors and provided promptly to the Finance Board.
- (d) Finance Board approval of Bank internal market risk model or internal cash flow model. Each Bank shall obtain Finance Board approval of an internal market risk model or an internal cash flow model, including subsequent material adjustments to the model made by the Bank, prior to the use of any model. Each Bank shall make such adjustments to its model as may be directed by the Finance Board.
- (e) Date of calculations. Unless otherwise directed by the Finance Board, each Bank shall perform any calcula-

tions or estimates required under this section using the assets and liabilities, off-balance sheet items, and derivative contracts held by the Bank, and if applicable, the values of any such holdings, as of the close of business of the last business day of the month for which the market risk capital requirement is being calculated.

## § 932.6 Operations risk capital requirement.

- (a) General requirement. Except as authorized under paragraph (b) of this section, each Bank's operations risk capital requirement shall at all times equal 30 percent of the sum of the Bank's credit risk capital requirement and market risk capital requirement.
- (b) Alternative requirements. With the approval of the Finance Board, each Bank may have an operations risk capital requirement equal to less than 30 percent but no less than 10 percent of the sum of the Bank's credit risk capital requirement and market risk capital requirement if:
- (1) The Bank provides an alternative methodology for assessing and quantifying an operations risk capital requirement: or
- (2) The Bank obtains insurance to cover operations risk from an insurer rated at least the second highest investment grade credit rating by an NRSRO.

### §932.7 Reporting requirements.

Each Bank shall report to the Finance Board by the 15th business day of each month its risk-based capital requirement by component amounts, and its actual total capital amount and permanent capital amount, calculated as of the close of business of the last business day of the preceding month, or more frequently, as may be required by the Finance Board.

## § 932.8 Minimum liquidity require ments.

In addition to meeting the deposit liquidity requirements contained in §965.3 of this chapter, each Bank shall hold contingency liquidity in an amount sufficient to enable the Bank to meet its liquidity needs, which

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shall, at a minimum, cover five business days of inability to access the consolidated obligation debt markets. An asset that has been pledged under a repurchase agreement cannot be used to satisfy minimum liquidity requirements.

# § 932.9 Limits on unsecured extensions of credit to one counterparty or affiliated counterparties; reporting requirements for total extensions of credit to one counterparty or affiliated counterparties.

(a) Unsecured extensions of credit to a single counterparty. A Bank shall not extend unsecured credit to any single counterparty (other than a GSE) in an amount that would exceed the limits of this paragraph. A Bank shall not extend unsecured credit to a GSE in an amount that would exceed the limits set forth in paragraph (c) of this section. If a third-party provides an irrevocable, unconditional guarantee of repayment of a credit (or any part thereof), the third-party guarantor shall be considered the counterparty for purposes of calculating and applying the unsecured credit limits of this section with respect the to guaranteed portion of the transaction.

(1) Term limits. All unsecured extensions of credit by a Bank to a single counterparty that arise from the Bank's on- and off-balance sheet and derivative transactions (but excluding the amount of sales of federal funds with a maturity of one day or less and sales of federal funds subject to a continuing contract) shall not exceed the product of the maximum capital exposure limit applicable to such counterparty, as determined in accordance with paragraph (a)(4) of this section and Table 4 of this part, multiplied by the lesser of:

(i) The Bank's total capital; or

(ii) The counterparty's Tier 1 capital, or if Tier 1 capital is not available, total capital (as defined by the counterparty's principal regulator) or some similar comparable measure identified by the Bank.

(2) Overall limits including sales of overnight federal funds. All unsecured extensions of credit by a Bank to a single counterparty that arise from the Bank's on- and off-balance sheet and derivative transactions, including the

amounts of sales of federal funds with a maturity of one day or less and sales of federal funds subject to a continuing contract, shall not exceed twice the limit calculated pursuant to paragraph (a)(1) of this section.

(3) Limits for certain obligations issued by state, local or tribal governmental agencies. The term limit set forth in paragraph (a)(1) of this section when applied to the marketable direct obligations of state, local or tribal government unit or agencies that are acquired member assets identified in §955.2(a)(3) of this chapter or are otherwise excluded from the prohibition against investments in whole mortgages or whole loan or interests in such mortgages or loans by §956.3(a)(4)(iii) of this chapter shall be calculated based on the Bank's total capital and the credit rating assigned to the particular obligation as determined in accordance with paragraph (a)(5) of this section. If a Bank owns series or classes of obligations issued by a particular state, local or tribal government unit or agency or has extended other forms of unsecured credit to such entity falling into different rating categories, the total amount of unsecured credit extended by the Bank to that government unit or agency shall not exceed the term limit associated with the highest-rated obligation issued by the entity and actually purchased by the Bank.

(4) Bank determination of applicable maximum capital exposure limits. (i) Except as set forth in paragraph (a)(4)(ii) or (a)(4)(iii) of this section, the applicable maximum capital exposure limits are assigned to each counterparty based upon the long-term credit rating of the counterparty, as determined in accordance with paragraph (a)(5) of this section, and are provided in the following Table 4 of this part:

TABLE 4—MAXIMUM LIMITS ON UNSECURED EX-TENSIONS OF CREDIT TO A SINGLE COUNTERPARTY BY COUNTERPARTY LONG-TERM CREDIT RATING CATEGORY

Long-term credit rating of counterparty category	Maximum cap- ital exposure limit (in percent)
Highest Investment Grade	15
Second Highest Investment Grade	14
Third Highest Investment Grade	9